

APPENDIX

1. (Amended) An apparatus including a polishing solution supply system, the polishing solution supply system comprising:

- a polishing table for placing a semiconductor substrate on a major surface thereof;
- a first supply unit for spraying and supplying a mist comprising abrasive slurry;
- a second supply unit for spraying and supplying a mist comprising additive;
- a third supply unit for spraying and supplying a mist comprising pure water; and
- a mixing unit for mixing the mist of abrasive slurry supplied from said first supply unit, the mist of additive supplied from said second supply unit and the mist of pure water supplied from said supply unit third supply unit to form a polishing mixture, said mixing unit supplying the polishing mixture onto said major surface of said polishing table.

2. (Amended) An apparatus including a polishing solution supply system, the polishing solution supply system comprising:

- a polishing table for placing a semiconductor substrate on a major surface thereof;
- a first supply unit for spraying and supplying a mist comprising abrasive slurry to a specified location on said major surface of said polishing table;
- a second supply unit for spraying and supplying a mist comprising additive onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit; and

a third supply unit for spraying and supplying a mist comprising pure water onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit and with the mist of additive supplied from said second supply unit.

3. (Twice Amended) The apparatus according to claim 1, wherein each of said supply units comprises:

a tank for storing liquid;

a pipe for supplying said liquid from said tank to said mixing unit;

a pump for supplying said liquid in said tank to said pipe at a pressure, or a gas supply unit for supplying a gas into said tank so as to supply said liquid in said tank to said pipe at a pressure;

a control unit for controlling the pressure of said liquid in said pipe at a flow rate; and

a spray unit for spraying said liquid supplied from said pipe into said mixing unit.

4. (Amended) The apparatus according to claim 2, wherein each of said supply units comprises:

a tank for storing liquid;

a pipe for supplying said liquid in said tank to said pipe at a pressure, or a gas supply unit for supplying a gas into said tank so as to supply said liquid in said tank to said pipe at a pressure;

a control unit for controlling the pressure of said liquid in said pipe; and

a spray unit for spraying said liquid supplied from said pipe onto said major surface of said polishing table.

5. (Twice Amended) The apparatus according to claim 3, wherein said control unit includes a flow meter for measuring the flow rate of liquids in said pipe, said control unit controlling a rotating speed of said pump or controlling the pressure of said gas supplied from said gas supply unit on the basis of the results of measurements by said flow meter.

6. (Amended) The apparatus according to claim 1, wherein said additive is an aqueous solution of organic acid, or an aqueous solution of hydrogen peroxide.

7. (Amended) The apparatus according to claim 2, wherein said additive is an aqueous solution of organic acid, or an aqueous solution of hydrogen peroxide.

8. (Amended) The apparatus according to claim 1, comprising a carrier head for pressing said semiconductor substrate against said major surface of said polishing table.

9. (Amended) The apparatus according to claim 2, comprising a carrier head for pressing said semiconductor substrate against said major surface of said polishing table.

10. (Twice Amended) A method of supplying a polishing solution in an apparatus including a polishing solution supply system, the polishing solution supply system comprising: a polishing table for placing a semiconductor substrate on a major surface thereof;

a first supply unit for spraying and supplying a mist comprising abrasive slurry; a second supply unit for spraying and supplying a mist comprising additive; a third supply unit for spraying and supplying a mist comprising pure water; and a mixing unit for mixing the mist of abrasive slurry unit supplied from said first supply unit, the mist of additive supplied from the second supply unit and the mist of pure water supplied from said third supply unit to form a polishing a mixture, said mixing unit supplying the polishing mixture onto said major surface of said polishing table, the method comprising:

spraying and supplying each of said mist comprising abrasive slurry, said mist comprising additive and said mist comprising pure water into said mixing unit, and mixing them in said mixing unit to form a polishing mixture; and

supplying the polishing mixture onto said major surface of said polishing table.

11. (Amended) A method of supplying a polishing solution in an apparatus including a polishing solution supply system, the polishing solution supply system, comprising:

a polishing table for placing a semiconductor substrate on a major surface thereof;

a first supply unit for spraying and supplying a mist comprising abrasive slurry to a specified location on said major surface of said polishing table;

a second supply unit for spraying and supplying a mist comprising additive onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit; and

a third supply unit for spraying and supplying a mist comprising pure water onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit and with the mist of additive supplied from said second supply unit, the

method comprising spraying and supplying each of said mist comprising abrasive slurry, said mist comprising additive and said mist comprising pure water onto said major surface of said polishing table so as to mix with each other.

12. (Amended) The method of supplying a polishing solution according to claim 10, further comprising:

measuring a quantity of each of said abrasive slurry, additive and pure water; and

controlling a supply pressure of each of said abrasive slurry, said additive and said pure water to a desired value on the basis of the results of measurement.

13. (Amended) The method of supplying a polishing solution according to claim 10, further comprising supplying pure water to said mixing unit, when said abrasive slurry is not supplied to said mixing unit for a specified period of time.

14. (Amended) A method of polishing a semiconductor substrate in an apparatus including a polishing solution supply system, the polishing solution supply system comprising: a polishing table for placing a semiconductor substrate on a major surface thereof; a first supply unit for spraying and supplying a mist comprising slurry; a second supply unit for spraying and supplying a mist comprising additive; a third supply unit for spraying and supplying a mist comprising pure water; and a mixing unit for mixing the mist of abrasive slurry supplied from said first supply unit, the mist of additive supplied from said second supply unit and the mist of pure water supplied from said third supply unit to form a polishing mixture, said mixing unit supplying the polishing mixture onto said major surface of said polishing table; and a carrier

head for pressing said semiconductor substrate against said major surface of said polishing table, while pressing the semiconductor substrate against said polishing table using said carrier head, the method comprising:

spraying and supplying each of said abrasive slurry, said additive, and said pure water into said mixing unit, and mixing them in said mixing unit; and

supplying the mixture onto said major surface of said polishing table.

15. (Amended) A method of polishing a semiconductor substrate in an apparatus including a polishing solution supply system, the polishing solution supply system comprising: a polishing table for placing a semiconductor substrate on a major surface thereof; a first supply unit for spraying and supplying a mist comprising abrasive slurry to a specified location on said major surface of said polishing table; a second supply unit for spraying and supplying a mist comprising additive onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit; and a third supply unit for spraying and supplying a mist comprising pure water onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit and with the mist of additive supplied from said second supply unit; and a carrier head for pressing said semiconductor substrate against said major surface of said polishing table, while pressing the semiconductor substrate against said polishing table using said carrier head, the method comprising, spraying and supplying each of said abrasive slurry, said additive, and said pure water onto said major surface of said polishing table so as to mix with each other.

16. (Amended) The method according to claim 10, comprising supplying the polishing solution during manufacturing a semiconductor device.

17. (Amended) The method according to claim 11, comprising spraying and supplying said mist comprising abrasive slurry, said mist comprising additive and said mist comprising pure water during manufacturing a semiconductor device.

18. (Amended) The method according to claim 14, further comprising manufacturing a semiconductor device using the semiconductor substrate.

19. (Amended) The method according to claim 15, further comprising manufacturing a semiconductor device using the semiconductor substrate.

APPENDIX

1. (Amended) An apparatus including a polishing solution supply system, the polishing solution supply system comprising:

- a polishing table for placing a semiconductor substrate on a major surface thereof;
- a first supply unit for spraying and supplying a mist comprising abrasive slurry;
- a second supply unit for spraying and supplying a mist comprising additive;
- a third supply unit for spraying and supplying a mist comprising pure water; and
- a mixing unit for mixing the mist of abrasive slurry supplied from said first supply unit, the mist of additive supplied from said second supply unit and the mist of pure water supplied from said supply unit third supply unit to form a polishing mixture, said mixing unit supplying the polishing mixture onto said major surface of said polishing table.

2. (Amended) An apparatus including a polishing solution supply system, the polishing solution supply system comprising:

- a polishing table for placing a semiconductor substrate on a major surface thereof;
- a first supply unit for spraying and supplying a mist comprising abrasive slurry to a specified location on said major surface of said polishing table;
- a second supply unit for spraying and supplying a mist comprising additive onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit; and

a third supply unit for spraying and supplying a mist comprising pure water onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit and with the mist of additive supplied from said second supply unit.

3. (Twice Amended) The apparatus according to claim 1, wherein each of said supply units comprises:

a tank for storing liquid;

a pipe for supplying said liquid from said tank to said mixing unit;

a pump for supplying said liquid in said tank to said pipe at a pressure, or a gas supply unit for supplying a gas into said tank so as to supply said liquid in said tank to said pipe at a pressure;

a control unit for controlling the pressure of said liquid in said pipe at a flow rate; and

a spray unit for spraying said liquid supplied from said pipe into said mixing unit.

4. (Amended) The apparatus according to claim 2, wherein each of said supply units comprises:

a tank for storing liquid;

a pipe for supplying said liquid in said tank to said pipe at a pressure, or a gas supply unit for supplying a gas into said tank so as to supply said liquid in said tank to said pipe at a pressure;

a control unit for controlling the pressure of said liquid in said pipe; and

a spray unit for spraying said liquid supplied from said pipe onto said major surface of said polishing table.

5. (Twice Amended) The apparatus according to claim 3, wherein said control unit includes a flow meter for measuring the flow rate of liquids in said pipe, said control unit controlling a rotating speed of said pump or controlling the pressure of said gas supplied from said gas supply unit on the basis of the results of measurements by said flow meter.

6. (Amended) The apparatus according to claim 1, wherein said additive is an aqueous solution of organic acid, or an aqueous solution of hydrogen peroxide.

7. (Amended) The apparatus according to claim 2, wherein said additive is an aqueous solution of organic acid, or an aqueous solution of hydrogen peroxide.

8. (Amended) The apparatus according to claim 1, comprising a carrier head for pressing said semiconductor substrate against said major surface of said polishing table.

9. (Amended) The apparatus according to claim 2, comprising a carrier head for pressing said semiconductor substrate against said major surface of said polishing table.

10. (Twice Amended) A method of supplying a polishing solution in an apparatus including a polishing solution supply system, the polishing solution supply system comprising: a polishing table for placing a semiconductor substrate on a major surface thereof;

a first supply unit for spraying and supplying a mist comprising abrasive slurry; a second supply unit for spraying and supplying a mist comprising additive; a third supply unit for spraying and supplying a mist comprising pure water; and a mixing unit for mixing the mist of abrasive slurry unit supplied from said first supply unit, the mist of additive supplied from the second supply unit and the mist of pure water supplied from said third supply unit to form a polishing a mixture, said mixing unit supplying the polishing mixture onto said major surface of said polishing table, the method comprising:

spraying and supplying each of said mist comprising abrasive slurry, said mist comprising additive and said mist comprising pure water into said mixing unit, and mixing them in said mixing unit to form a polishing mixture; and

supplying the polishing mixture onto said major surface of said polishing table.

11. (Amended) A method of supplying a polishing solution in an apparatus including a polishing solution supply system, the polishing solution supply system, comprising:

a polishing table for placing a semiconductor substrate on a major surface thereof;

a first supply unit for spraying and supplying a mist comprising abrasive slurry to a specified location on said major surface of said polishing table;

a second supply unit for spraying and supplying a mist comprising additive onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit; and

a third supply unit for spraying and supplying a mist comprising pure water onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit and with the mist of additive supplied from said second supply unit, the

method comprising spraying and supplying each of said mist comprising abrasive slurry, said mist comprising additive and said mist comprising pure water onto said major surface of said polishing table so as to mix with each other.

12. (Amended) The method of supplying a polishing solution according to claim 10, further comprising:

measuring a quantity of each of said abrasive slurry, additive and pure water; and

controlling a supply pressure of each of said abrasive slurry, said additive and said pure water to a desired value on the basis of the results of measurement.

13. (Amended) The method of supplying a polishing solution according to claim 10, further comprising supplying pure water to said mixing unit, when said abrasive slurry is not supplied to said mixing unit for a specified period of time.

14. (Amended) A method of polishing a semiconductor substrate in an apparatus including a polishing solution supply system, the polishing solution supply system comprising: a polishing table for placing a semiconductor substrate on a major surface thereof; a first supply unit for spraying and supplying a mist comprising slurry; a second supply unit for spraying and supplying a mist comprising additive; a third supply unit for spraying and supplying a mist comprising pure water; and a mixing unit for mixing the mist of abrasive slurry supplied from said first supply unit, the mist of additive supplied from said second supply unit and the mist of pure water supplied from said third supply unit to form a polishing mixture, said mixing unit supplying the polishing mixture onto said major surface of said polishing table; and a carrier

head for pressing said semiconductor substrate against said major surface of said polishing table, while pressing the semiconductor substrate against said polishing table using said carrier head, the method comprising:

spraying and supplying each of said abrasive slurry, said additive, and said pure water into said mixing unit, and mixing them in said mixing unit; and
supplying the mixture onto said major surface of said polishing table.

15. (Amended) A method of polishing a semiconductor substrate in an apparatus including a polishing solution supply system, the polishing solution supply system comprising: a polishing table for placing a semiconductor substrate on a major surface thereof; a first supply unit for spraying and supplying a mist comprising abrasive slurry to a specified location on said major surface of said polishing table; a second supply unit for spraying and supplying a mist comprising additive onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit; and a third supply unit for spraying and supplying a mist comprising pure water onto said major surface of said polishing table so as to mix with the mist of abrasive slurry supplied from said first supply unit and with the mist of additive supplied from said second supply unit; and a carrier head for pressing said semiconductor substrate against said major surface of said polishing table, while pressing the semiconductor substrate against said polishing table using said carrier head, the method comprising, spraying and supplying each of said abrasive slurry, said additive, and said pure water onto said major surface of said polishing table so as to mix with each other.

16. (Amended) The method according to claim 10, comprising supplying the polishing solution during manufacturing a semiconductor device.

17. (Amended) The method according to claim 11, comprising spraying and supplying said mist comprising abrasive slurry, said mist comprising additive and said mist comprising pure water during manufacturing a semiconductor device.

18. (Amended) The method according to claim 14, further comprising manufacturing a semiconductor device using the semiconductor substrate.

19. (Amended) The method according to claim 15, further comprising manufacturing a semiconductor device using the semiconductor substrate.